

TWO-STAGE PULSE DETONATION SYSTEM

ABSTRACT OF THE DISCLOSURE

[0067] A two-stage pulse detonation system includes a pre-combustor and a geometric resonator connected via a converging-diverging nozzle to the pre-combustor to create a high temperature and high pressure conditions in the resonator in order to create optimal conditions for detonation initiation. A mixture of a fuel and a gas is burned in the pre-combustor and is passed through the nozzle into the geometric resonator, where the burned mixture is detonated. The detonation propagates through the resonator exit nozzle thus generating thrust.